

REMARKS

Reconsideration of this application is respectfully requested. Applicant has addressed every ground for rejection in the Office Action dated June 17, 2005, and believes the application is now in condition for allowance.

The present invention relates to a safety mechanism for preventing the accidental discharge of live ammunition during training exercises. In particular, the present invention prevents the discharge of an actual or live round of ammunition from a firearm through the use of a plurality of apertures located about the barrel portion of the firearm and aligned with the shoulder portion of the case, or the weakest part of the case. The apertures cause portions of the cartridge to be blown out so as to vent the pressure which is generated by the firing of the cartridge, through the apertures and thereby retain the cartridge within the firearm. In the preferred embodiment, the portions of the cartridge that are blown out burr out into the apertures to prevent the firearm operator or shooter from manually operating the bolt to place another live round in the chamber. Accordingly, if live rounds are loaded into a firearm, the firearm will malfunction after the first live round is attempted to be discharged, thereby preventing the shooter from attempting to fire more than one live round of ammunition.

The claims have been amended, and new claims added, to more clearly describe the present invention. In particular, the claims have been amended to state that the apertures are aligned with the shoulder of the cartridge case.

Pursuant to the Examiner's request, Applicant hereby submits drawings illustrating a barrel having (1) two apertures and (2) six apertures. The claims currently indicate that the barrel has at least two apertures or six apertures. Accordingly, it is respectfully submitted that the drawings comply with the applicable regulations.

Claim 1 has been objected to on the basis of the inclusion of the word “portion” in the preamble. As indicated above, Claim 1 has been amended to state that the apertures are aligned with the shoulder of the present invention. Accordingly, it is respectfully submitted that the objection should be withdrawn.

Claims 1-3 and 10 stand rejected under 35 U.S.C. §102(b) as being anticipated by Canadian Patent Application No. 2,189,904 to Dionne et al. Dionne is directed to a system for releasing pressure in connection with simulated cartridges fired in a modified firearm. The modified firearm includes a bore that has a diameter that is substantially less than the bore of a conventional weapon that would be chambered for the same cartridge. The reduced size of the bore acts to prevent the firing of a live round. The barrel also includes an elongated pressure-relief orifice that extends parallel with the axis of the cartridge and along substantially all of the chamber length.

The claims have been amended to clarify that the system and method involve at least two apertures that are aligned with the shoulder of the cartridge. This permits the pressure that is expunged from the cartridge to be directed away from the sides of the gun to prevent the user or those standing adjacent to the user to be injured when the gun is fired with a live cartridge.

As set forth in the supplemental declaration of Robert Gee, based on the elementary laws of physics and his testing, the disclosed embodiment of the Dionne application would not be operable as disclosed in connection with rifle or machine gun cartridges. [Gee Supp. Declaration par. 7]. In particular, because of the pierce strength of the brass cartridges used in a military style cartridge, and the fact that the size of the pressure relief port is in direct relationship to the pierce strength, a hole of the disclosed size (namely 5/32 inches wide and 0.02 and 0.03 inches less than the overall cartridge length) would require pressures of approximately two and one-half

times the pressure generated in a standard live military cartridge to pierce the brass case. [Id.]. Accordingly, the cartridge using the teaching of the Dionne application would only bulge the cartridge. Id.

In the testing done by Applicant, use of singular holes that were smaller than then ones taught by Dionne would only bulge the cartridge case. Id. at par. 8. Furthermore, as Dionne teaches using the elongated slot in connection with a reduced barrel diameter, the cartridge will not be able to be propelled down the barrel. Id. As pressure takes the path of least resistance, which would be the chamber wall, locking lugs, bolt body or frame, in operation, by placing the elongated slot in the position set forth in the Dionne disclosure, as much as 50,000 pounds of pressure per square inch may be delivered directly into the hand of the shooter or to eye level of anyone standing in the immediate vicinity of the shooter. Id.

As injury due to venting the pressure was one of the concerns that the Applicant had in designing the claimed system, the claimed system allows for the vented gas/pressure to be directed away from the shooter and those standing beside the shooter by drilling the holes at an angle to the center line of the barrel bore so that they are aligned with the shoulder of the cartridge. Dionne, on the other hand, includes holes that are “parallel with the axis of the cartridge”, thereby expunging any gas or pressure perpendicular to the gun barrel, creating a risk that the shooter or another person may be injured when a live cartridge is loaded and fired. Furthermore, because of the teaching of elongated orifices, there would be no teaching or motivation to place the opening in alignment with the shoulder.

Accordingly, it is respectfully submitted that Dionne does not teach the use of at least two apertures that are aligned with the shoulder of a cartridge, wherein pressure will be sufficiently vented to prevent live ammunition to be fired from a rifle or machine gun, while protecting the

shooter and those standing next to the shooter from being injured from the released gas/pressure.. Accordingly, it is respectfully submitted that the present rejection should be withdrawn and the claims be allowed to issue.

Should the Examiner discover that there are remaining issues that could be resolved by an interview, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

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Respectfully submitted,

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